

**WEST**

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L3: Entry 1 of 2

File: JPAB

Jan 18, 1991

PUB-NO: JP403010909A

DOCUMENT-IDENTIFIER: JP 03010909 A

TITLE: PNEUMATIC TIRE

PUBN-DATE: January 18, 1991

## INVENTOR-INFORMATION:

NAME

YOKOYAMA, HIDEKI

COUNTRY

## ASSIGNEE-INFORMATION:

NAME

BRIDGESTONE CORP

COUNTRY

APPL-NO: JP01143453

APPL-DATE: June 6, 1989

US-CL-CURRENT: 152/209.12

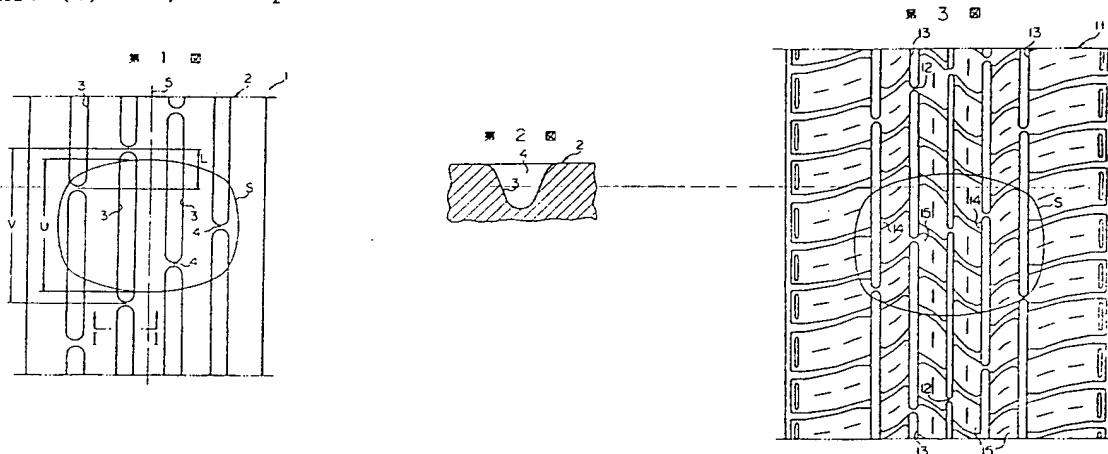
INT-CL (IPC): B60C 11/06; B60C 11/04

## ABSTRACT:

PURPOSE: To decrease noise generated from tunnel-shaped space, which is formed when each of many peripheral grooves contacts with a road, by dividing the tunnel-shaped space through arranging plural dividing walls inside the peripheral grooves provided on a surface of a tread portion.

CONSTITUTION: On a surface of a tread portion 2 of a tire 1, there are many peripheral grooves 3, which are separated with each other in the direction of a tire axis. As the tread portion 2 is in contact with a road surface so that a ground contact zone S is formed during rolling of the tire 1, each of the peripheral grooves 3 is deformed by pressure, and tunnel shaped space is formed. In this case, plural dividing walls 4 are provided inside each of the peripheral grooves 3. Consequently, the peripheral grooves 3 are divided into plural circular-arc-shaped spaces. When each of dividing walls 4 arrives in the ground contact zone S, the tunnel-shaped spaces are divided and air flow inside the peripheral grooves 3 is interrupted. In this way, a jet of air from the tunnel-shaped space is suppressed and a resonance frequency is dispersed.

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L3: Entry 2 of 2

File: DWPI

Jan 18, 1991

DERWENT-ACC-NO: 1991-061924  
DERWENT-WEEK: 199109  
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TITLE: Pneumatic tyre with reduced road noise - has circumferential tread grooves spaced at specific distances apart corresp. to ground contact area on loading

## PATENT-ASSIGNEE:

ASSIGNEE

CODE

BRIDGESTONE CORP

BRID

PRIORITY-DATA: 1989JP-0143453 (June 6, 1989)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 03010909 A	January 18, 1991		000	

## APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP 03010909A	June 6, 1989	1989JP-0143453	

INT-CL (IPC): B60C 11/06

ABSTRACTED-PUB-NO: JP 03010909A

## BASIC-ABSTRACT:

The tyre has a tread with circumferential grooves running in the circumferential direction, which have walls formed in each circumferential groove. The walls are spaced apart from each other by 1.0 to 2.0 times the length of the ground-contact area on application of a normal load. Further, the walls in at least adjacent grooves are sepd. from each other.

The walls (4) dividing each circumferential groove (3) are apart from each other by the distance (V) which is 1.0 to 2.0 times the length (U) of the ground-contact area (S) at the equator, and further the walls in adjacent grooves are also apart from each other by the distance (L).

ADVANTAGE - By dispersing resonance frequencies by means of the walls formed in each groove, tyre noises is reduced.

CHOSEN-DRAWING: Dwg.0/3

TITLE-TERMS: PNEUMATIC TYRE REDUCE ROAD NOISE CIRCUMFERENCE TREAD-GROOVE-SPACE-SPECIFIC  
DISTANCE APART CORRESPOND GROUND CONTACT AREA LOAD

DERWENT-CLASS: A95 Q11

CPI-CODES: A12-T01B;

## POLYMER-MULTIPUNCH-CODES-AND-KEY-SERIALS:

Key Serials: 0009 0231 2624 3258 2826

Multipunch Codes: 014 032 04- 41& 50& 551 560 562 651 672 699

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1991-026302

Non-CPI Secondary Accession Numbers: N1991-047736

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L1: Entry 1 of 2

File: JPAB

Mar 9, 1993

PUB-NO: JP405058109A

DOCUMENT-IDENTIFIER: JP 05058109 A

TITLE: PNEUMATIC RADIAL TIRE

PUBN-DATE: March 9, 1993

## INVENTOR-INFORMATION:

NAME

KURODA, YUKIO

COUNTRY

## ASSIGNEE-INFORMATION:

NAME

YOKOHAMA RUBBER CO LTD:THE

COUNTRY

APPL-NO: JP03220373

APPL-DATE: August 30, 1991

US-CL-CURRENT: 152/560

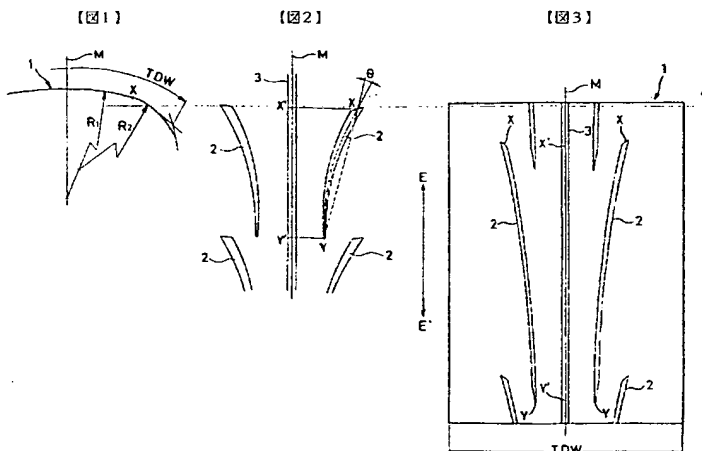
INT-CL (IPC): B60C 9/08; B60C 11/00; B60C 11/04

## ABSTRACT:

PURPOSE: To maintain the running performance on a dry road surface and enhance the running performance on a wet road surface by giving a specific value to the ratio of the radius of the continuing arc of circle at a tread center to that at the shoulder part, and furnishing the surface with grooves approaching the tire equator and reducing the width repetitively as heading the circumferential direction from the point on each circular arc where the carvature changes.

CONSTITUTION: A tread 1 is formed with a circular arc R2 at the shoulder part as continuing the circular arc in the center of tread radius R1, wherein their ratio R1/R2 shall range between 3.0-3.5. The distance along the circular arc from the tire equation M at the curvature changing point X where the two first named circular arcs intersect shall be 20-30% of the tread spread width TDW. Grooves 2 approaching the wire equator M and reducing the width are formed repetitively toward the point Y in the tire circumferential direction from the curvature changing point X, wherein the distances of projecting points X', Y' of points X, Y to the tire equator M shall be 5-15% of the tire circumference length and 100-300% of the circumferential direction length of the tire grounding shape while the distance of the point Y from the equator M be 40-60% of the distance between X and X'. Thereby the running performance on a dry road surface can be well maintained, and the running performance on a wet road surface be enhanced.

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L1: Entry 2 of 2

File: DWPI

Mar 9, 1993

DERWENT-ACC-NO: 1993-120981  
DERWENT-WEEK: 199315  
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TITLE: High speed car radial tyre having improved wet performance without sacrificing dry performance - having a tread profile formed with two circular axes on the meridional cross=section

PATENT-ASSIGNEE:

ASSIGNEE

YOKOHAMA RUBBER CO LTD

CODE

YOKO

PRIORITY-DATA: 1991JP-0220373 (August 30, 1991)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>JP 05058109 A</u>	March 9, 1993		004	B60C009/08

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP 05058109A	August 30, 1991	1991JP-0220373	

INT-CL (IPC): B60C 9/08; B60C 11/04

ABSTRACTED-PUB-NO: JP 05058109A  
BASIC-ABSTRACT:

On the meridinal cross-section, the tread profile is formed with two circular arcs, one with radius R1 for the central region and the other with radius R2 for the shoulder region. The ratio R1/R2 is made to be 3.0 to 3.5 and the intersection point X is distanced 0.2 to 0.3 times the tread developed width (TDW) from the tyre equator M. In plan view of the tread surface, repeated circular or straight grooves are provided from points X to Y with decreasing width, X' and Y' are the projections of X and Y to the tyre equator M respectively, the length X'Y' is 5 to 15% of the tyre's round length and is 1.0 to 3.0 times the circumferential length of the ground contact figure. The distance YY'; is 40 to 60% of the distance XX'.

ADVANTAGE - The wet performance is improved without sacrificing the dry performance. The tyre is good as a semi-racing tyre.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: HIGH SPEED CAR RADIAL TYRE IMPROVE WET PERFORMANCE-SACRIFICIAL-DRY  
PERFORMANCE TREAD PROFILE FORMING TWO CIRCULAR AXIS MERIDIAN CROSS=SECTION

DERWENT-CLASS: A95 Q11

CPI-CODES: A12-T01B;

POLYMER-MULTIPUNCH-CODES-AND-KEY-SERIALS:  
Key Serials: 0009 0231 2826 3300

Multipunch Codes: 014 032 04- 41& 57& 672

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1993-053619

Non-CPI Secondary Accession Numbers: N1993-092453